

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

WARREN M. FARNWORTH  
SALMAN AKRAM  
ALAN G. WOOD

ART UNIT:

Division of Serial No. 09/961,646  
filed on September 25, 2001

Serial No.:

EXAMINER:

Filing Date: APRIL 8, 2004

FOR: SEMICONDUCTOR INTERCONNECTS HAVING  
LASER MACHINED CONTACTS

Docket No. 97-1363.6

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**INFORMATION DISCLOSURE STATEMENT**  
**April 8, 2004**

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The following sections are being submitted for this Information Disclosure Statement:

1.   x   Preliminary Statements
2.   x   FORM PTO SB/08
3.        Statement As to Information Material to  
Examination Not Found in Patents or Publications.
4.   x   Identification of Prior Application in Which Listed  
Information Was Already Cited and For Which No Copies  
are Submitted Or Need be Submitted.
5.        Cumulative Patents or Publications.
6.        Copies of Listed Information Items Accompanying  
This Statement.

7. \_\_\_\_\_ Concise Explanation of Non-English Language Listed Information Items.
8. \_\_\_\_\_ Translation(s) of Non-English Language Documents.
9.   x   Identification of Person(s) Making This Information Disclosure Statement.

### Section 1. Preliminary Statements

Applicants submit herewith patents, publications or other information of which they are aware which they believe may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. §1.56.

The filing of this information disclosure statement shall not be construed as a representation that a search has made (37 C.F.R. 1.56 (g)), an admission that the information cited is, or is considered to be, material to patentability or that no other material information exists.

### Section 2. Identification of Person(s) Making This INFORMATION DISCLOSURE STATEMENT

The person making this statement is  
(a) \_\_\_\_\_ the inventor(s) who signs below

\_\_\_\_\_  
SIGNATURE OF INVENTOR

\_\_\_\_\_  
Name of Inventor

(b)   x   the attorney who signs below on the basis of:

- \_\_\_\_\_ the information supplied by the inventor(s)
- \_\_\_\_\_ an individual associated with the filing and prosecution of this application (37 CFR 1.56(c))
- x   the information in the attorney's file.

**Section 3. Identification of Prior Application In Which Listed Information Was Already Cited and For Which No Copies are Submitted or Needed Be Submitted.**

This application relies, under 35 U.S.C. 120, on the earlier filing date of application serial no. 09/961,646, filed 09/25/2001, which is a division of serial no. 09/385,606, filed 08/30/1999, Patent No. 6,294,387, which is a division of serial no. 08/993,965, filed 12/18/1997, Patent No. 6,107,109.

The attached list of references were submitted to and/or cited by the Office in these prior applications and, therefore, are not required to be provided in this application.

DATED this 8th day of April, 2004.

Respectfully submitted:

  
\_\_\_\_\_  
Stephen A. Gratton  
Registration No. 28,418  
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**CERTIFICATE OF MAILING BY "EXPRESS MAIL"**

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I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Mail Stop Patent Application, Commissioner of Patents, PO Box 1450, Alexandria, VA 22313-1450.

April 8, 2004  
Date of Signature

  
\_\_\_\_\_  
Stephen A. Gratton, Attorney for Applicants

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**Sheet 1 of 4

Application Number	
Filing Date	April 8, 2004
First Named Inventor	WARREN M. FARNWORTH
Art Unit	
Examiner Name	
Attorney Docket Number	97-1363.6

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	A	US- 5,046,239	09/10/1991	Miller	
	B	US- 5,063,177	11/05/1991	Geller et al.	
	C	US- 5,172,050	12/15/1992	Swapp	
	D	US- 5,222,014	06/22/1993	Lin	
	E	US- 5,229,647	07/20/1993	Gnadinger	
	F	US- 5,236,551	08/17/1993	Pan	
	G	US- 5,249,450	10/05/1993	Wood et al.	
	H	US- 5,404,044	04/04/1995	Booth et al.	
	I	US- 5,420,520	05/30/1995	Anschel et al.	
	J	US- 5,426,072	06/20/1995	Finnila	
	K	US- 5,483,741	01/16/1996	Akram et al.	
	L	US- 5,484,647	01/16/1996	Nakatani et al.	
	M	US- 5,487,999	01/30/1996	Farnworth	
	N	US- 5,528,080	06/18/1996	Goldstein	
	O	US- 5,541,525	07/30/1996	Wood et al.	
	P	US- 5,557,844	09/24/1996	Bhatt et al.	
	Q	US- 5,578,526	11/26/1996	Akram et al.	
	R	US- 5,592,736	01/14/1997	Akram et al.	
	S	US- 5,607,818	03/04/1997	Akram et al.	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear
		Country Code <sup>3</sup> * Number * Kind Code <sup>4</sup> (if known)			

Examiner Signature		Date Considered	
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**INFORMATION DISCLOSURE  
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**Complete if Known**Sheet **2** of **4**

Application Number	
Filing Date	April 8, 2004
First Named Inventor	WARREN M. FARNWORTH
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Examiner Name	
Attorney Docket Number	97-1363.6

**U. S. PATENT DOCUMENTS**

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		Number-Kind Code <sup>2</sup> (if known)			
	T	US- 5,633,122	05/27/1997	Tuttle	
	U	US- 5,634,267	06/03/1997	Farnworth et al.	
	V	US- 5,674,785	10/07/1997	Akram et al.	
	W	US- 5,686,317	11/11/1997	Akram et al.	
	X	US- 5,716,218	02/10/1998	Farnworth et al.	
	Y	US- 5,739,585	04/14/1998	Akram et al.	
	AA	US- 5,781,022	07/14/1998	Wood et al.	
	AB	US- 5,783,461	07/14/1998	Hembree	
	AC	US- 5,783,865	07/21/1998	Higashiguchi et al.	
	AD	US- 5,796,590	08/18/1998	Klein	
	AE	US- 5,801,452	009/01/1998	Farnworth et al.	
	AF	US- 5,815,000	09/29/1998	Farnworth et al.	
	AG	US- 5,834,945	11/10/1998	Akram	
	AH	US- 5,869,974	02/09/1999	Akram et al.	
	AI	US- 5,870,289	02/09/1999	Tokuda et al.	
	AJ	US- 5,876,580	03/02/1999	Lykins	
	AK	US- 5,878,485	03/09/1999	Wood et al.	
	AL	US- 5,896,036	04/20/1999	Wood et al.	
	AM	US- 5,915,977	06/19/1999	Hembree et al.	

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**Complete If Known**Sheet **3**of **4**

Application Number	
Filing Date	April 8, 2004
First Named Inventor	WARREN M. FARNWORTH
Art Unit	
Examiner Name	
Attorney Docket Number	97-1363.6

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	AN	US- 5,929,647	07/17/1999	Akram et al.	
	AO	US- 5,931,685	08/03/1999	Hembree et al.	
	AP	US- 5,936,847	08/10/1999	Kazle	
	AQ	US- 5,952,840	09/14/1999	Farnworth et al.	
	AR	US- 5,962,921	10/05/1999	Farnworth et al.	
	AS	US- 6,013,948	01/11/2000	Akram et al.	
	AT	US- 6,040,702	03/21/2000	Hembree et al.	
	AU	US- 6,107,109	08/22/2000	Akram et al.	
	AV	US- 6,107,119	08/22/2000	Farnworth et al.	
	AW	US- 6,114,240	09/05/2000	Akram et al.	
	AX	US- 6,162,997	12/19/2000	Memis	
	AY	US- 6,294,837 B1	09/25/2001	Akram et al.	
	AZ	US- 6,353,328 B2	03/05/2002	Akram et al.	
	BA	US- 6,356,098 B1	03/12/2002	Akram et al.	
	BB	US- 6,362,637 B2	03/26/2002	Farnworth et al.	
	BC	US- 6,400,172 B1	06/04/2002	Akram et al.	
	BD	US- 6,417,685 B1	07/09/2002	Akram et al.	
	BE	US- 6,437,591 B1	08/20/2002	Farnworth et al.	
	BF	US- 6,451,624 B1	09/17/2002	Farnworth et al.	

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		First Named Inventor	WARREN M. FARNWORTH
		Art Unit	
		Examiner Name	
Sheet 4	of 4	Attorney Docket Number	97-1363.6

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	BG	T. R. ANTHONY. "Forming Electrical Interconnects Through Semiconductor Wafers", American Institute of Physics, 1981, pgs 5340-5349.	

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